Tab 3
Army Pregnancy and Postpartum Physical Training Program for Soldiers Business Case Analysis

Executive Summary

Most pregnant Soldiers can exercise safely throughout pregnancy and postpartum within the American College of Obstetricians and Gynecologists (ACOG) guidelines and under the advice of their obstetrician. Exercise during pregnancy and postpartum promotes a healthier pregnancy and faster return to pre-pregnancy physical readiness levels.

The intent of an Army Pregnancy and Postpartum Physical Training (PPPT) Program is to affect force *readiness* by providing the commander with a safe, standardized program led by personnel certified in pregnancy and postpartum fitness. The program is designed to promote readiness through health by maintaining fitness levels of pregnant Soldiers and successfully integrating postpartum Soldiers back into unit physical training.

To address this need, a PPPT Program has been developed by the Army Medical Department (AMEDD) at the US Army Center for Health Promotion and Preventive Medicine (USACHPPM). The Program consists of two main components: an educational component to train program leaders in pregnancy and postpartum physical training (PT) and an implementation guide to provide guidance on establishing a local PPPT program.

Replication studies are currently underway at four locations to assess the safety and effectiveness of the PPPT program. The metrics being employed to judge the success of the program include the APFT scores and pass rate, AR 600-9 pass rate, medical outcomes, and personal satisfaction. Initial results have been analyzed and additional data collection will continue.

In November 2002, the standardization of physical training for pregnant and postpartum Soldiers was accepted as a Community Family Support Center Army Family Action Plan (CFSF AFAP) Issue and is being followed up by the Army Vice Chief of Staff. The PPPT program is currently being staffed for Army-wide implementation as an element of the US Army Physical Fitness Training Program.

Background

Description of Need

Pregnancy impacts the Army by its sheer numbers, medical costs, and influence on readiness. Since1999, women have accounted for more than 15% of Army active duty Soldiers. Among active duty female Soldiers in 2002, 8.2% became pregnant and delivered babies according to reports from the Standard Inpatient Data Record (SIDR) and Health Care Service Record-Institutional (HCSR-I) (M2 Data Source, June 2003). Since 2000, pregnancy-related conditions

have accounted for more hospitalization (24%) than any other diagnostic category (MSMR April 2001 and MSMR March/April 2002).

An uncomplicated pregnancy is a healthy, normal condition for young women. It is inappropriate to equate pregnancy with increased susceptibility to illness, injury, or disability. An analysis by the Army Medical Surveillance Activity (Military Surveillance Medical Record (MSMR) July 2001) indicated that women who are pregnant and have babies while on active duty have less morbidity for conditions not related to pregnancy than their non-pregnant counterparts. However, it must be recognized that pregnancy does affect a Soldier's fitness and readiness potential, and requires medical attention.

There are many misperceptions regarding pregnancy. Pregnancy is often inappropriately equated with an inability to completely and reliably fulfill certain job requirements. This perception is heightened in the military since pregnant Soldiers are not deployable and are exempt from certain training and duty demands. In addition, there is a perception that pregnant Soldiers have:

- Difficulty doing appropriate physical training
- Difficulty meeting APFT and AR 600-9 Height/Weight Standards after pregnancy
- Reduced fitness levels as measured by the APFT and Body Fat during and after pregnancy
- Increased injuries/illnesses upon return to unit PT

A study published in 1997 supported these perceptions. The three-year study, conducted by US Army Research Institute of Environmental Medicine and the US Army Medical Research Material Command, took place at Madigan Army Medical Center, Ft. Lewis, Washington. This study provided sufficient evidence to show that, without appropriate intervention, postpartum Soldiers who return to unit PT after nine months of pregnancy and six months of postpartum show:

- Reduced fitness levels
- Increased body fat
- Significant increases in injuries and illness rates

Pregnancy and Exercise

There is no scientific basis for Soldiers with normal pregnancies to avoid exercise. According to the ACOG, exercise during pregnancy helps to maintain cardio-respiratory and muscular fitness throughout the pregnancy and the postpartum period. ACOG Jan 2002 Committee Opinion states that in the absence of either medical or obstetric complications, pregnant women can accumulate 30 minutes or more of moderate level physical activity most, if not all, days of the week to maintain health and well-being.

The latest Joint Clinical Practice Guidelines on *Exercise in Pregnancy and the Postpartum Period*, released in June 2003 by the Society of Obstetricians and Gynecologists of Canada (SOGC) and the Canadian Society of Exercise Physiologists, 2003, recommends that all women without contraindications be encouraged to do aerobic and strength-conditioning exercises during pregnancy with reasonable goals to maintain a good fitness level. The document says that

"women and their care providers should consider the risk of *not* participating in exercise activities during pregnancy, including loss of muscular and cardiovascular fitness, excessive maternal weight gain,…. higher risk of gestational diabetes, a higher incidence of physical complaints and poor adjustment to the physical changes of pregnancy." (JOGC, June 2003)

There are numerous civilian academic studies that show the association between exercise and a healthy pregnancy and postpartum period. Two Army studies support the benefits of exercise during pregnancy and the postpartum period. The first study was a Tri-service Nursing Research Study conducted at Ft. Bragg in 1998. This study followed a structured exercise program for pregnant and postpartum Soldiers called the Pregnant Soldiers Wellness Program (PSWP). APFT pass rates were evaluated and the following was found: a 93 percent pass rate for those in Pregnant Soldiers Wellness Program (PSWP) versus a 77 percent pass rate for a tri-service group who did not participate in a structured exercise program. However, the strength of this study was limited by the fact that it had a volunteer bias and there was a large loss to follow-up.

The second study also evaluated a structured exercise program for pregnant and postpartum Soldiers. This study, conducted at Ft. Carson, showed higher APFT scores for those who attended pregnancy and postpartum PT classes more than 50 percent of the time.

A table summarizing the details of civilian and Army studies is included as Appendix A to this business case analysis.

Pregnancy/Postpartum Exercise and Readiness

It is clear, then, that exercise during pregnancy and postpartum promotes a faster return to physical readiness levels and prevents excessive body fat gain. Recognizing the need to encourage physical activity during pregnancy, the Office of the Deputy Chief of Staff for Personnel (ODSPER) issued DA Message 251912Z in March 1996. The message highly recommended "installations offer pregnancy PT programs to assist pregnant and postpartum Soldiers in maintaining fitness throughout their pregnancy and to assist them in returning to pre-pregnancy fitness levels after pregnancy termination." The message also extended the recovery period for APFT to up to six months after pregnancy termination.

As a result of this message, most major Army installations established physical training programs for pregnant Soldiers. However, no specific guidance, training, or educational materials for exercise leaders accompanied the HQDA recommendation. This lack of guidance, training, and educational materials has resulted in current Army programs that vary widely in safety, implementation, funding, personnel, quality, and sustainability. In addition, there is little command accountability. This lack of ownership has often led to difficulty in obtaining personnel, dedicated time and facilities for the program. Because of this situation, numerous Soldiers do not train at all, are left to train on their own, or are led by exercise leaders untrained in pregnancy fitness. This is a readiness and morale issue for the Soldier and the unit.

Upon receiving frequent requests from the field for training assistance and guidance in program development, the AMEDD through the USACHPPM recognized the need for a standardized PPPT program. USACHPPM began a PPPT-development project in 1998 with a Pregnancy

Symposium attended by health and fitness personnel. A pregnancy fitness expert and consultant from Yale University was hired to assist with content development. In 2000, ODCSPER under BG Miller initiated the Pregnancy and Readiness campaign and took the lead for standardization of an Army PPPT program.

In view of this lack of standardization, the Office of the Surgeon General made PT during pregnancy voluntary on the part of the Soldier in the May 2001 revision to AR 40-501, pregnancy and postpartum physical profiles.

Army Family Action Plan Scope and Conference Recommendation

In November 2002, the Community Family Support Center (CFSC) Army Family Action Plan (AFAP) recommended the standardization of pregnancy /postpartum physical training, and it was accepted as Issue #532. The recommendations given by the CFSF AFAP Steering Committee were to develop and implement a standardized, mandatory, Army-wide program for pregnant Soldiers that include command emphasis on:

a. pregnancy, postpartum and related educational information and physical fitness training;
b. training for a safe, effective return to physical fitness and weight standards.

The AFAP recommendations have been incorporated into the development of the Army PPPT program and can be met by its implementation.

Department of Defense Instruction 1308.3

The Department of Defense issued DoD Instruction 1308.3, "DoD Physical Fitness and Body Fat Programs Procedures." This document provides guidance regarding programs for physical fitness, and body fat that are addressed by the PPPT Program, including:

5.4.8.3 Narrative descriptions of remedial programs used to assist service members in complying with established physical fitness and body fat standards.

6.1.2.1 Service members should exercise on a regular basis (e.g., three to five times each week) and to an intensity that provides a training effect. Individuals with injuries and on medical profiles shall be placed on a medically approved exercise program only after consultation with medical authorities.

6.1.2.2 Pregnant service members will engage in physical activity to maintain cardiovascular and muscular fitness throughout the pregnancy and postpartum period, in accordance with medical guidance. Exercise regimens will consist of routines that include physical training and nutritional counseling.

6.2.3.6 A pregnant service member's postpartum weight loss should be consistent with the recommendation of medical authorities and the Military Services' guidelines for satisfactory progress.

Program Goals and Objectives

It has already been stated that exercise can promote faster return to pre-pregnancy fitness levels and help prevent excessive body fat gain. The PPPT program provides benefits for the Army, unit, commander, and Soldier. Specific goals for this program are to:

(1) Provides Army leadership with a safe and standardized pregnancy/postpartum physical fitness training program that will help maintain unit readiness and morale by giving Soldiers a prescriptive physical training program that meets their specific needs.

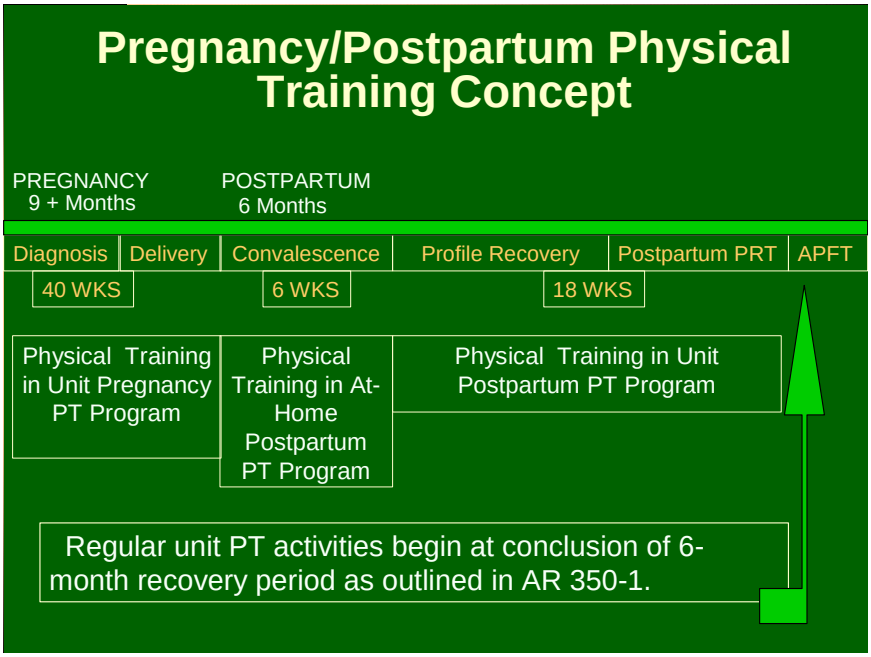
(2) Increases individual Soldier morale and retention by assisting the Soldier in maintaining health and fitness levels during pregnancy and improving fitness levels postpartum.

Program Design

The PPPT Program must be a senior mission commander's program to implement and maintain. The senior mission commander will ensure necessary funding allocation, provide dedicated space and facilities, determine enrollment procedures and accountability for attendance, and specify the responsibility for tracking outcomes (APFT and Weight Control Data). Also crucial to the success of a PPPT program are coordination and collaboration between the garrison, line command and the medical staff.

Program Overview

The diagram below provides an overview of the program design. The goal of the pregnancy PT portion is to maintain basic fitness levels according to the performance abilities of the pregnant Soldier. The goal of the At-Home program is to give the Soldier initial exercises and fitness goals so that they are ready to participate in PT after convalescent leave. The goal of the postpartum PT portion is to assist the Soldier in improving fitness in order to pass the APFT and AR 600-9 standards and transition back to unit PT successfully. The green arrow indicates where in the PT timeline current policy and regulation mandate training and provide guidance to meet the physical training needs of postpartum Soldiers.



Program Specifics

The physical training program is conducted three to five times per week during unit PT time. PT sessions include the components of:

- Balance and coordination
- Cardiorespiratory exercise
- Strength and endurance exercises
- Flexibility
- Stress management and relaxation

During the six-week convalescent period, an At-Home Postpartum PT program designed for initial progressive reconditioning will be available to Soldiers. At the end of convalescent leave, Soldiers enter Postpartum PT with an emphasis on improving fitness levels and losing excess body fat and weight, and can participate from 6-18 weeks. It is recommended that they pass a diagnostic APFT and meet AR 600-9 height/weight standards before returning to unit PT. The recovery reconditioning discharge requirements of the US Army Physical Fitness Training Program must be met before they are able to return to unit PT.

The program is coordinated by three categories of leaders: Medical Expert, Instructor Trainer, and Exercise Leaders. The Medical Expert (ME) is a part-time position, designated by the Medical Treatment Facility and trained by the US Army Physical Fitness Training Program specified proponent. The Medical Expert would be either a military or civilian medical professional, preferably with OB/GYN background. Medical Expert responsibilities include medical consultation, assistance with training of the exercise leaders, and oversight of the program for safety and quality assurance.

The Instructor Trainer (IT) is designated by the senior mission commander and trained by the US Army Physical Fitness Training Program specified proponent. The size of the installation would determine whether this would be a full or part time position. To provide program continuity, a civilian is preferred for this position. The IT should have a background in fitness and/or a medically-related field. IT responsibilities include coordinating day-to-day operation of the PPPT program, liaison with the units, teaching Exercise Leaders to lead daily sessions of PPPT, and collecting outcome measures to evaluate the program, such as statistics on the APFT and AR 600-9 pass/fail rates.

Exercise Leaders (EL) are trained by the IT, with assistance from the ME. Assigning military NCOs from the unit on a rotating basis is the preferred choice for this position. It is highly recommended that ELs have fitness backgrounds since they will lead exercise sessions for the pregnant and postpartum Soldiers.

An effective complement to the physical fitness training program component is a series of educational opportunities on subjects related to pregnancy and postpartum issues. It is recommended that coordination of these educational opportunities for pregnant Soldiers, during PT time on a non-PT day, be accomplished through collaboration between OB/GYN clinic and Army Public Health/ Community Health Nursing as a component of the Uncomplicated Pregnancy Clinical Practice Guidelines.

Program Implementation Plan

Program Development

In 1998, USACHPPM held a Pregnancy Symposium to establish criteria for the PPPT program and to develop a program implementation outline. The symposium included community health nurses, physical therapists, a midwife, an exercise physiologist, pregnancy fitness instructors and leaders, and a representative from the US Army Physical Fitness School (APFS).

In addition to these experts, the Army's policy regarding pregnancy and postpartum was consulted. This policy rests primarily in three regulations:

- AR 350-1 provides guidance for unit commanders and states that pregnant personnel will not participate in unit Physical Training.
- AR 600-9 governs weight control policy and states that Soldiers are exempt from policy during pregnancy and must meet requirements at 6 months post pregnancy termination.
- AR 40-501 provides guidance for medical personnel. This regulation governs the profiling of pregnant Soldiers, prohibits pregnant Soldiers from participating in unit PT and APFT testing, and provides guidance for exercise at health care provider discretion.

Educational Materials

USACHPPM developed a variety of educational materials to support the training program. They include the following:

Four manuals
- Medical Expert
- Instructor Trainer
- Exercise Leader
- Soldier Workbook

Five videotapes
- Fundamental Concepts of Pregnancy and Exercise
- Pregnancy Fitness Program Development
- Fundamental Concepts of Postpartum Exercise
- Postpartum Fitness Program Development
- Prenatal and Postpartum Cardiovascular Workout

PPPT Program Implementation Guide
- Establish PPPT installation program
- Identifying duties of PPPT personnel
- Incorporate certification as part of the PPPT program
- Creating SOPs for operation of the program

Training CD
- Tools to support the training and implementation process
- Core health education curriculum power-point presentations

Army Reserve and National Guard and Remote Soldier materials
- An increase in activation of these Soldiers over the past five years has made apparent the need for *every* Soldier to be fit and ready to deploy. The PPPT program should be available to every Soldier, not just those Soldiers with unit PT. This package is intended to be used after a Soldier has received clearance for participation from her healthcare provider.
- Reserve and National Guard and Remote Soldier workbook and video set have been produced and distributed through the Army National Guard Surgeons and Regional Readiness Command Surgeons.

The educational materials have been endorsed for content and safety by Office of the Surgeon General consultants for Obstetrics and Gynecology, Women's Health Issues, Maternity Child Nursing and Women's Health Advanced Practice Nursing and the US Army Physical Fitness School. Copies of the endorsement letters available upon request from USACHPPM/ Health Promotion and Wellness, 410-436-7844.

Pilot Test and Evaluation

A pilot test of the Army PPPT program was conducted at Ft. Benning beginning in April 2001. Funding for the pilot test was provided by the Health Promotion and Prevention Initiatives (HPPI) program.

More than 100 pregnant Soldiers enrolled in the Ft. Benning PPPT program in 2001. Data was collected from 41 participants who completed participation in the program. Program feedback was obtained via regular data calls and conference calls. Analysis of data from the pilot program indicated the following:

- No pre-terms births were reported for program participants.
- Program participation was associated with a statistically significant improvement in APFT measures.
- Program participation was associated with no statistically significant difference in weight before pregnancy and 3 to 4 months postpartum.
- Only 15 percent of program participants delivered via cesarean section. This compares favorably with the National average c-section rate of 22.9% (CDC) and the overall Army c-section rate of 21% (DMSS data.) However, this finding is made less significant due to the lack of delivery data.

During the pilot program, participants and leaders evaluated program materials and the implementation manual. Modifications and updates were made as necessary. A detailed Pilot Data Analysis is available upon request from USACHPPM/ Health Promotion and Wellness, 410-436-7844.

Program Replication and Evaluation

To further refine the PPPT program for Army-wide use, the program was replicated in FY02 at additional sites. Funding was provided through the HPPI program. Ft. Drum and Ft. Bragg incorporated the PPPT content and processes into their existing PPPT program. Ft. Benning continued program implementation using the updated materials.

In FY03, the Program continued replication at Ft. Drum, Ft. Bragg, and Ft. Benning, and began in USACHPPM Europe. Data collection from USACHPPM Europe began in Aug 03 when pregnant Soldiers began to return from convalescent leave, and will be included in a later analysis.

The outcome measures at the replication sites are:
- APFT pass rate and score improvement
- AR 600-9 height/weight/ percent body fat pass rate
- Medical outcomes related to the health of the mother

A mid-point data collection and analysis was completed. Although there are limitations due to the small data sample, PPPT enrollees have shown improved APFT scores postpartum and a return to pre-pregnancy weight. This analysis is consistent with the data from the Fort Benning Pilot Study. The safety of the program is clear. No adverse outcomes have been reported. Only one pre-term birth among program enrollees has been recorded.

An end-of-year data analysis was completed on data from Ft. Benning, Ft. Bragg, and Ft. Drum. Major emphasis was placed on the APFT outcomes that reflect a Soldier's readiness and faster return to pre-pregnant fitness levels. Matched pairs were compared between pre-pregnant (last

APFT before became pregnant) and diagnostic scores (taken approximately 4 weeks after return from convalescent leave), diagnostic and record scores (taken approximately 180 days after delivery), and pre-pregnant and record scores. Findings were as follows:

- A significant difference was observed between the pre-pregnant and diagnostic scores for all the APFT measures (APFT total score, sit-ups, pushups, 2 minute runtime). This indicates that as expected, there is a de-conditioning effect during pregnancy and the 6-week convalescent period. $p < 0.01$

- A significant difference was observed between the diagnostic and record scores for all the APFT measures (APFT total score, sit-ups, pushups, 2 minute runtime). This indicates that as seen in previous evaluations, based on these fitness measures, there is a significant improvement in fitness during the postpartum period. $p < 0.01$

- A smaller significant difference was also observed between the pre-pregnant and record scores for most of the APFT measures (APFT total score, pushups, 2 minute runtime). There was no significant difference between the scores for sit-ups. This indicates that, based on these fitness measures, there continues to be additional improvement in fitness needed to reach pre-pregnant fitness levels, but that the difference is less significant than the other APFT comparisons. $p < 0.05$

- Three out of four sites fell below both the Army and National average for c-sections. One location was a significant outlier.

	Replication Evaluation Analysis (2003)	US Army Active Duty Soldiers (2002)	CDC National Average (2000)
C-section Rate	**19%; 20%;36% (Bragg)**	22.4%*	22.9%

*Data Source: Standard Inpatient Data Record and Health Care Service Record - Institutional, M2 (MDC14), June 2003

High drop-out rates from Soldiers either choosing to leave the Army or having a change of duty station (33%), deployments at 4-months postpartum, and the voluntary status of program participation resulted in a low return of postpartum data. Data on the APFT pass rate, AR 600-9 pass rate, rate of return to pre-pregnant weight, and rate of preterm births are not available due to incomplete data. The End-of-Year Data Analysis is available upon request from USACHPPM/ Health Promotion and Wellness, 410-436-7844.

Towards Implementation

Upon the Army Surgeon General (TSG) approval and signature of endorsement, the PPPT program will be staffed through Army G-1, Army G-3 and Installation Management Agency (IMA) for implementation.

As a physical fitness training program, it is recommended that Army G-3 become the program proponent IAW AR 350-1. Deputy Chief of Staff (DCS), Army G-3 must designate and resource the US Army Physical Fitness Training Program specified proponent (US Army

Physical Fitness School) with appropriate fitness professionals to implement and sustain Army-wide standardized PPPT as an element of the US Army Physical Fitness Training Program.

Recommended personnel resourcing for the US Army Physical Fitness Training Program specified proponent includes one aerobics instructor or licensed fitness trainer with pregnancy fitness training.

Implementation Plan

An implementation plan has been drafted that includes these major benchmarks:

- OTSG endorse program.
- IMA give verbal support of PPPT concept.
- DCS, Army G-1 endorse Army PPPT Program and establish implementation policies.
- DCS, Army G-3 accept proponency of the Army PPPT program.
- Proponent organizations update Army Regulations and policies.
- DCS, Army G-3 designate and resource the US Army Physical Fitness Training Program specified proponent.
- IMA endorse PPPT program and agree to provide adequate/ appropriate facilities, equipment, and personnel to meet PPPT Program requirements.
- MOU and support agreements written between Army G-1, Army G-3, IMA, and MEDCOM.
- Medical SME train US Army Physical Fitness Training Program specified proponent.
- Senior mission commanders assign or hire fitness personnel to conduct the PPPT Programs.
- US Army Physical Fitness Training Program specified proponent train local PPPT personnel.
- US Army Physical Fitness Training Program specified proponent sustain training/oversee local programs.

Investment

Pre-Implementation

The development of a standardized PPPT Program for a military population has been accomplished. This required the up-front investment of resources by USACHPPM, as shown in the table below. This does not include the labor hours put in by USACHPPM personnel.

Subject matter expert consultation	$83,030
Program material development	$293,095
Copyright permission fees	$5,300
Staffing costs	$510
Material costs	$72,862
Program replication costs	$7,683
Reserve/National Guard/Remote Package	$19,540
TOTAL PRE-IMPLEMENTATION INVESTMENT	$482,020.00

Cost Benefit Analysis

Summary

Implementation of a standardized PPPT Program has the potential to provide significant benefits to Army readiness. Many of the benefits are qualitative in nature such as the perceived improved well-being of Soldiers who participate in a PPPT program. The program also has the potential to provide a significant quantitative return on investment. Identified below are the potential benefits associated with the PPPT Program. The details of the costs and benefits of the PPPT Program are available upon request from USACHPPM/ Preventive Medicine Resourcing Office, 410-436-7208.

TOTAL ARMY COST
(local programs + proponent staff)

Cost - Year One of Implementation

Description	Total
Labor (DAC health/ fitness FTE)	$125,000
Travel	$ 51,600
Supplies/Equipment	$168,000
Total Cost - Year One of Implementation	$344,600

Cost - Year Two and Beyond

Description	Total
Labor	$125,000
Travel	$ 51,600
Supplies/Equipment	$ 13,300
Total Cost - Year Two and Beyond	**$189,900**

Economic Analysis (FY 07-13)

Costs	$1,484,000
Benefits	$109,098,491
ROI: Benefit to Cost Ratio	73.52
Break-Even Point Occurs at	Year 1
Cost Per Enlisted Pregnancy Per Year One/ Year Two and beyond	**$85/ $47**

TOTAL ARMY COST
(local programs ONLY)

Cost - Year One of Implementation

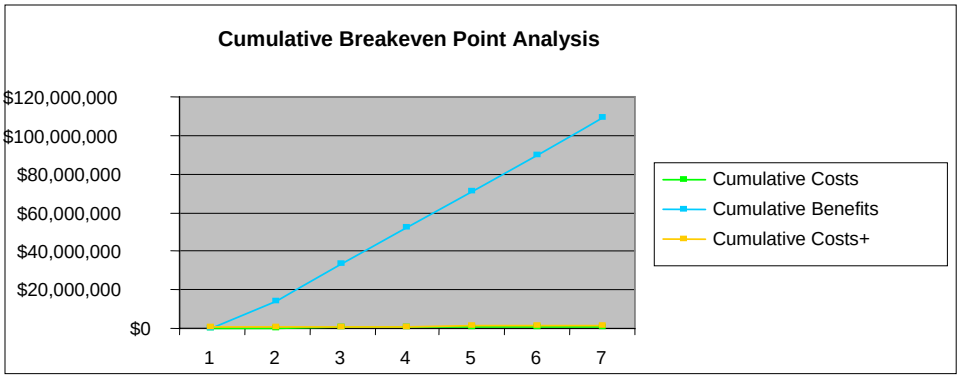
Description	Total
Labor	$ -
Travel	$ 51,600
Supplies/Equipment	$ 168,000
Cost - Year One of Implementation	$ 219,600

Cost - Year Two and Beyond

Description	Total
Labor	$ -
Travel	$ 51,600
Supplies/Equipment	$ 13,300
Total Cost - Year Two and Beyond	**$ 64,900**

Economic Analysis (FY 07-13)

Costs	$609,000
Benefits	$109,098,491
ROI: Benefit to Cost Ratio	179.14
Break-Even Point Occurs at	Year 1
Cost Per Enlisted Pregnancy Per Year One/ Year Two and beyond	**$54/ $16**



Tangible Benefits

Benefits = Costs Avoided	**$ 18,973,651**

Readiness Related Benefits	***$***	***17,557,899***
-- Average Recruitment and Training Dollars Lost	$	11,959,939
-- Productivity Cost Lost (based on work hours lost)	$	5,597,960

Medically Related Benefits	***$***	***1,415,752***
1. Reduced cesarean section (C-Section deliveries).		
-- Reduced delivery costs	$	562,453
-- Reduced hospitalization-related lost days (cost per day)	$	44,959
2. Fewer complications associated with delivery.		
-- Reduced delivery costs	$	770,420
-- Reduced hospitalization-related lost days (cost per day)	$	37,919

As the table below shows, exercise also helps increase productivity during pregnancy.[3]

	PSWP Participants		Non-Participants	
	Hours Worked per Week	Hours Exercised per Week	Hours Worked per Week	Hours Exercised per Week
1st Trimester	10.5	3	10.5	2.9
2nd Trimester	10.8	4.1	9.9	2.9
3rd Trimester*	8.2	3.8	7.9	2.1
Average	9.8	3.6	9.4	2.6

* Mandatory 8-hour workday per AR

1. Clapp J.F. The effect of continuing regular endurance exercise on the physiologic adaptations to pregnancy and pregnancy outcome. (Third IOC World Congress on Sports Sciences) Am J Sport Med 1996; 24: S28 - 30.
2. Sampselle C.M., Seng J., Yeo S., Killion C., Oakley D. Physical activity and postpartum well-being. J OBGyn Neonatal Nurs 1999; 28: 41- 49.
3. Tri-Service Nursing Research Program, Proposal No. N97-034, MDA No. 905-97-Z-0028, "The Pregnant Soldier Wellness Program (PSWP): An Evaluation Extension," Principal Investigator, Darlene M. Gilcreast, LTC, AN.

Intangible Benefits

A standardized Army-wide PPPT program has the potential to provide significant intangible benefits. Rewards to the organization include:

- Help maintain unit readiness and morale
- Increase Soldier retention

Benefits to the individual Soldier from a standardized Army PPPT program include:

- Maintain basic fitness levels IAW performance abilities of the pregnant Soldier.
- Reduce physical discomforts and stress during pregnancy.
- Promote a healthy pregnancy.
- Contribute to the prevention of excessive gains in weight and body fat.
- Promote faster return to physical fitness levels and assist in transition to unit PT.

Specific readiness-related benefits include:

- Improved VO2 max at six months[1]
- Recovered more rapidly from birth process[1]
- Fewer physical complaints during pregnancy[1]
- Less weight gain resulting in lower body mass index[2]
- Improved postpartum APFT and AR 600-9 pass rates[3]

Recommendations

The Army requires Soldiers to meet fitness standards at six months postpartum. It must provide a safe, structured program to assist them in their reconditioning efforts. In recognition of the established need for a standardized Army PPPT Program, PPPT standardization as an AFAP issue, inclusion of PPPT programs in current regulations and policies, and the positive outcomes evidenced in the replication of the PPPT program, the following recommendations are made:

1) TSG endorses Army-wide implementation of the PPPT Program by the following actions:

- Updating AR 40-501, Standards of Medical Fitness, to be consistent with guidance on participation in PPPT IAW AR 350-1, Army Training and Education.
- Providing MEDCOM health care professionals to support the PPPT program through medical expert consultation and quality assurance oversight.

2) DCS, Army G-1 facilitate Army-wide implementation of the PPPT Program by:

- Approving the Army PPPT Program and establishing policies to implement standardized PPPT Programs throughout the Army IAW PPPT Program standards found within USACHPPM Technical Guides 255 A-E.
- Updating AR 600-9, Army Weight Control Program, and AR 600-63, Army Health Promotion, to be consistent with AR 350-1, Army Training and Education.

3) DCS, Army G-3 endorsement of the Army PPPT program by the following actions:

- Accepting proponency of the Army PPPT Program, IAW AR 350-1, Army Training and Education.

- Designating and resourcing the US Army Physical Fitness Training Program specified proponent with appropriate fitness professional to implement and sustain the Army PPPT Program as an element of the US Army Physical Fitness Training Program.

- Updating AR 350-1, Army Training and Education and the Field Manual on Army Physical Fitness Training to include guidance on pregnancy/ postpartum physical training.

4) IMA endorse the approved PPPT program through the following action:

- Have adequate and appropriate facilities, equipment, and personnel to meet requirements for implementation of PPPT as an element of the US Army Physical Fitness Training Program.